

EMERGENCY VEHICLE OPERATOR CLASS “A”

Session 1-2

Operating Tractor-Drawn Apparatus



PROGRAM GOAL



To provide each driver/operator
with the basic skills and
knowledge required to safely,
efficiently, and effectively operate
tractor-drawn fire apparatus



OPERATING TRACTOR DRAWN APPARATUS

Principles for Driving Tractor Drawn Apparatus

- **Teamwork is Essential!**
- Good communication can avoid collisions
- Driver is responsible for the entire apparatus
- Tiller person is there to assist

OPERATING TRACTOR DRAWN APPARATUS

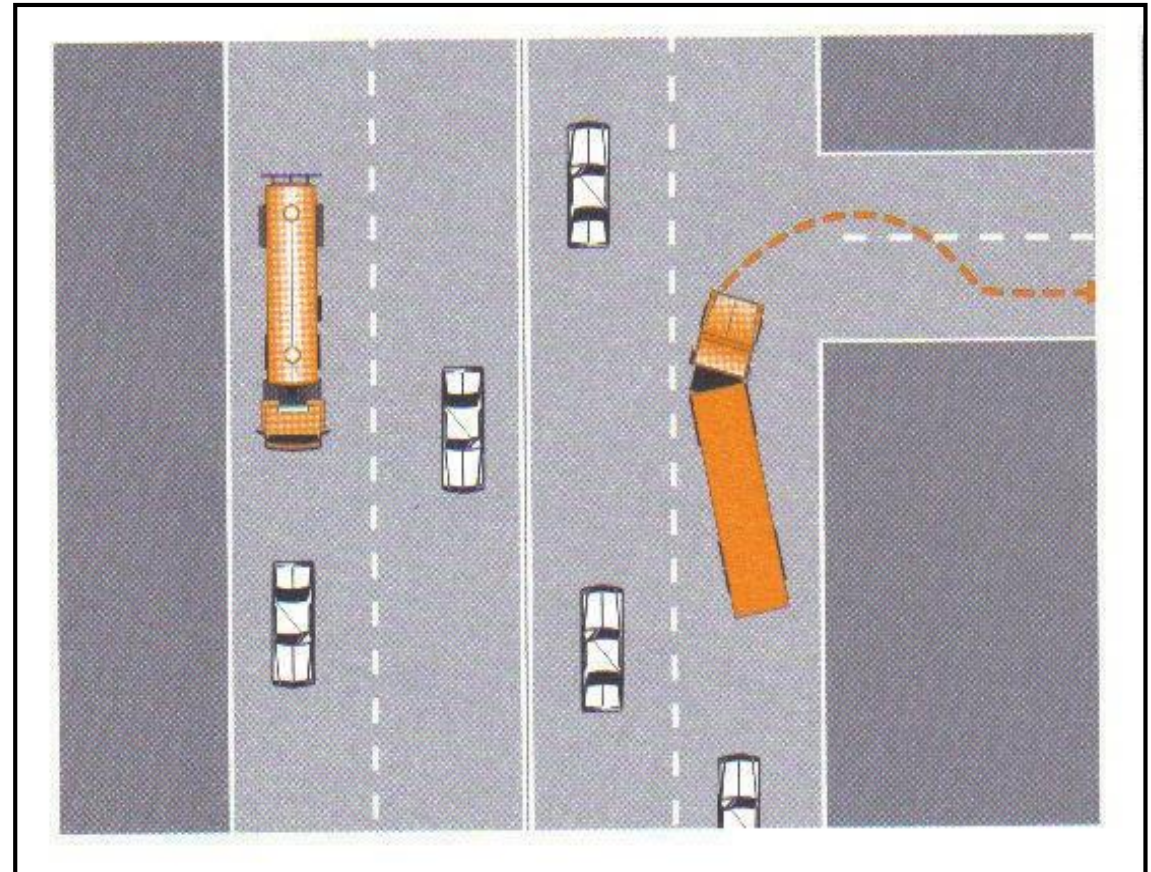


Advantages of TDA

- Maneuverability in congested traffic areas
- Allows for better positioning at incidents
- Compartment space for equipment

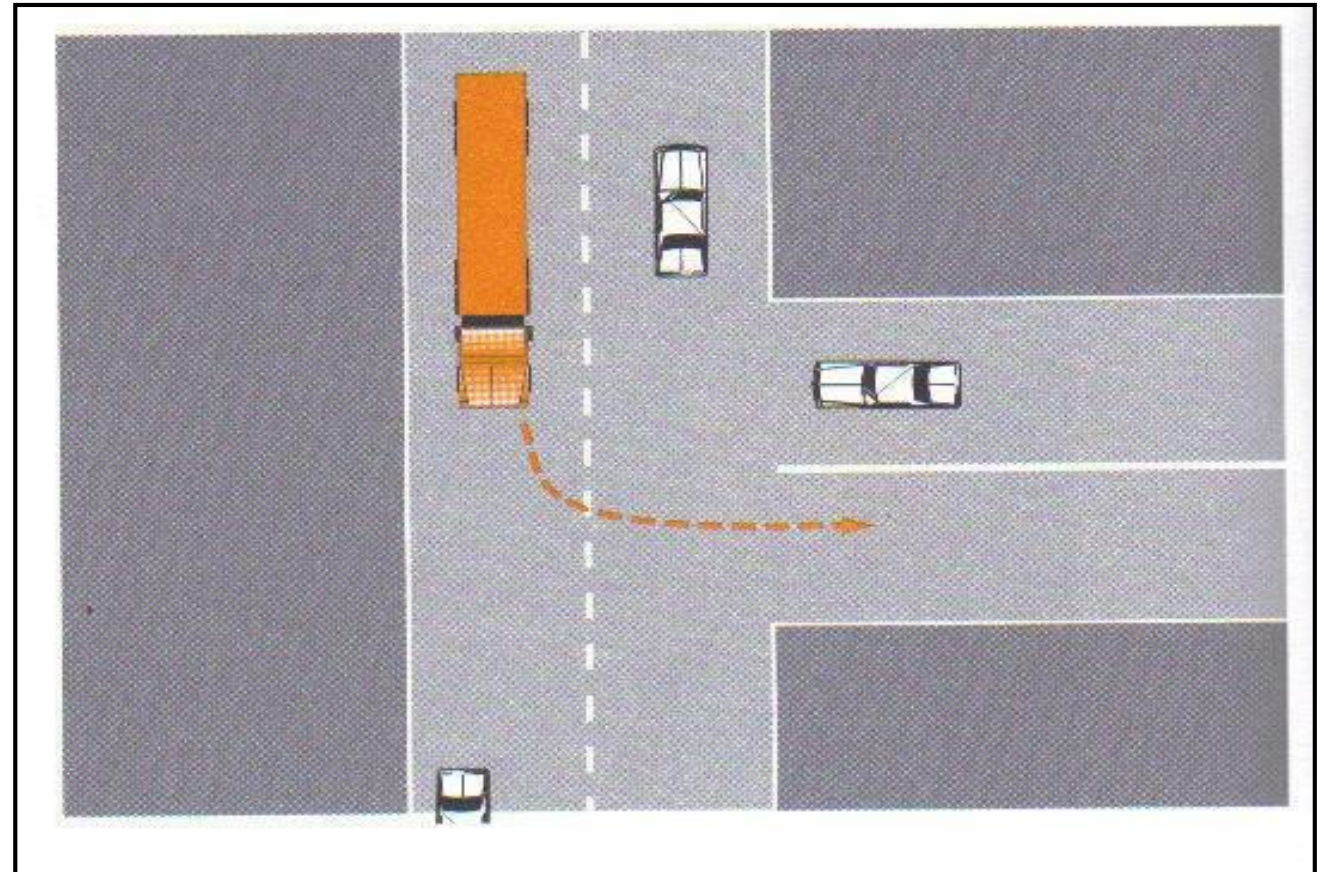
Operating Tractor Drawn Apparatus- Right Turns

- Lane Position
- Traffic Patterns
- Road Type
- Passing on Right



Operating Tractor Drawn Apparatus- Left Turns

- Lane Position
- Traffic Pattern
- Road Design
- Vehicle Position
- Round off Turn 90%

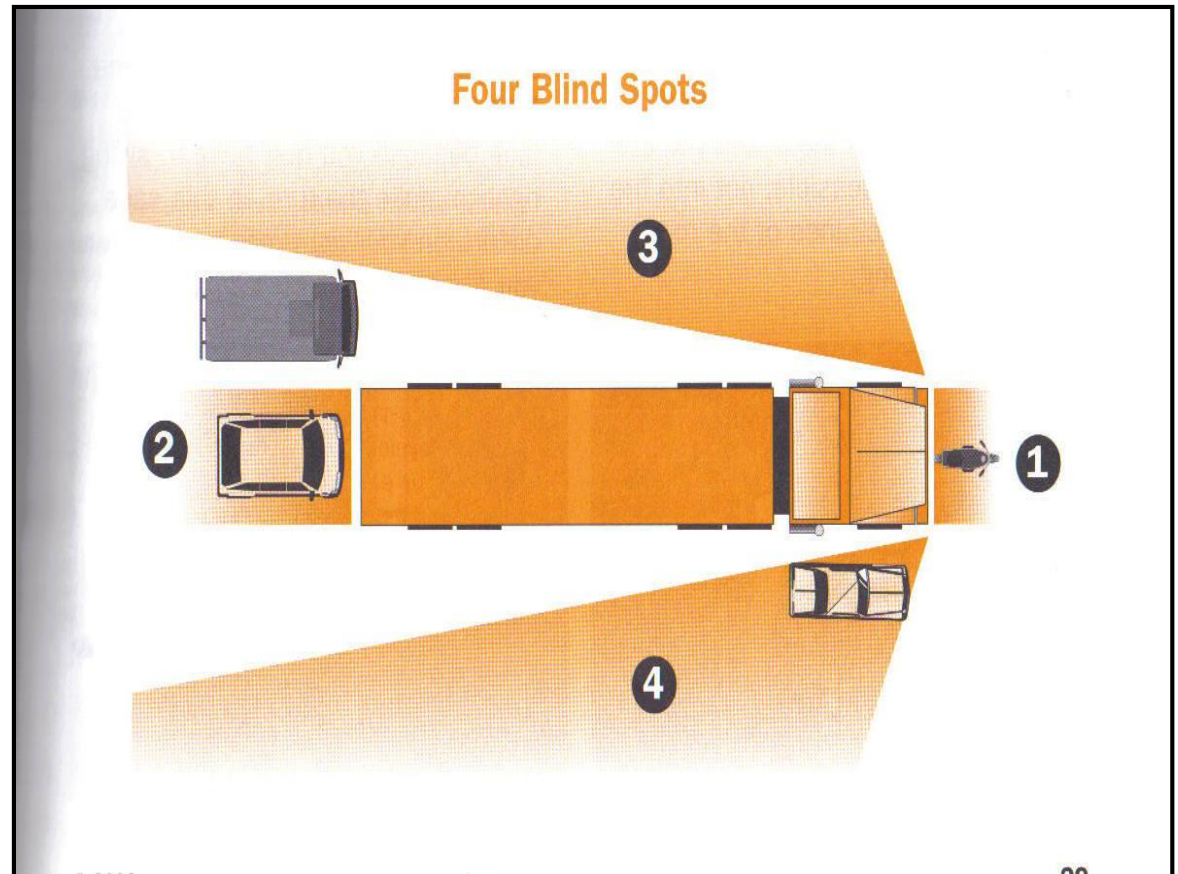


Operating Tractor Drawn Apparatus- Blind Spots



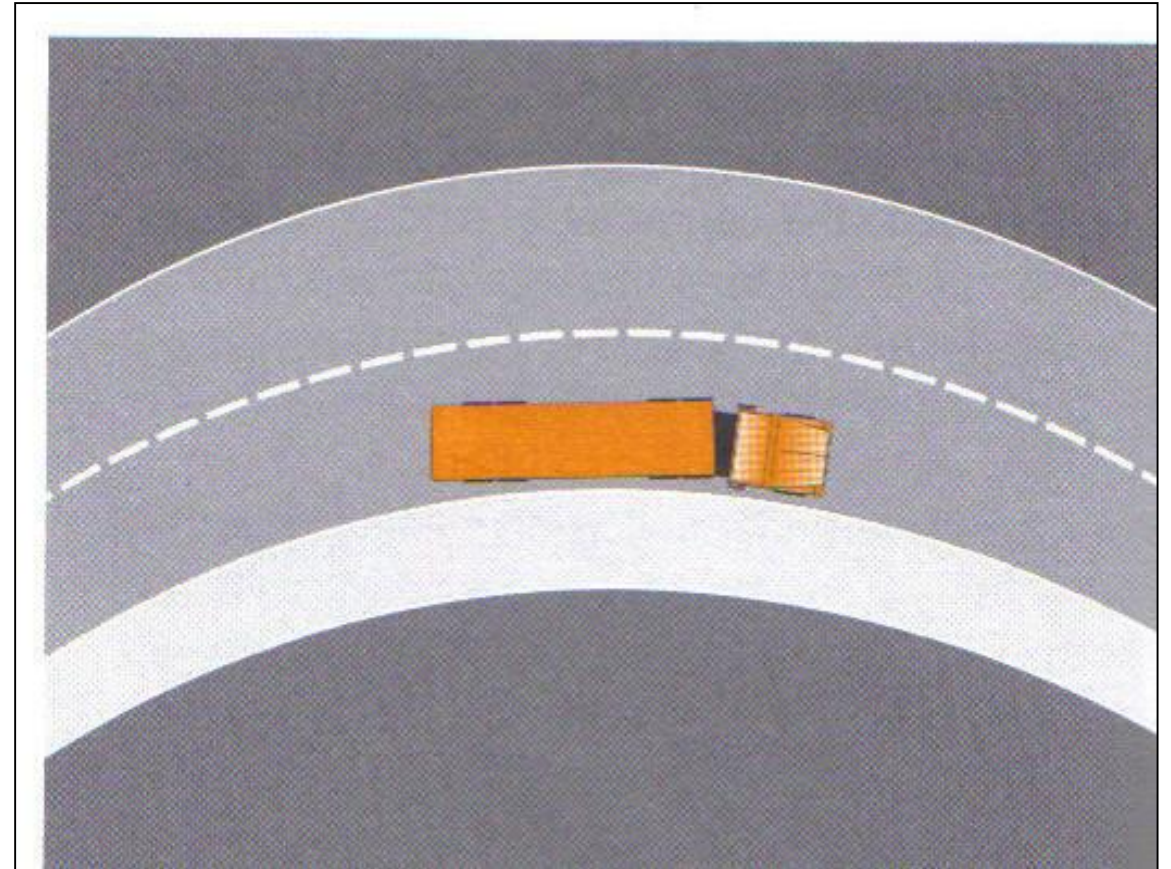
Driver & Tiller Person

- Front
- Right Side
- Rear
- Left Side



Operating Tractor Drawn Apparatus- Curves

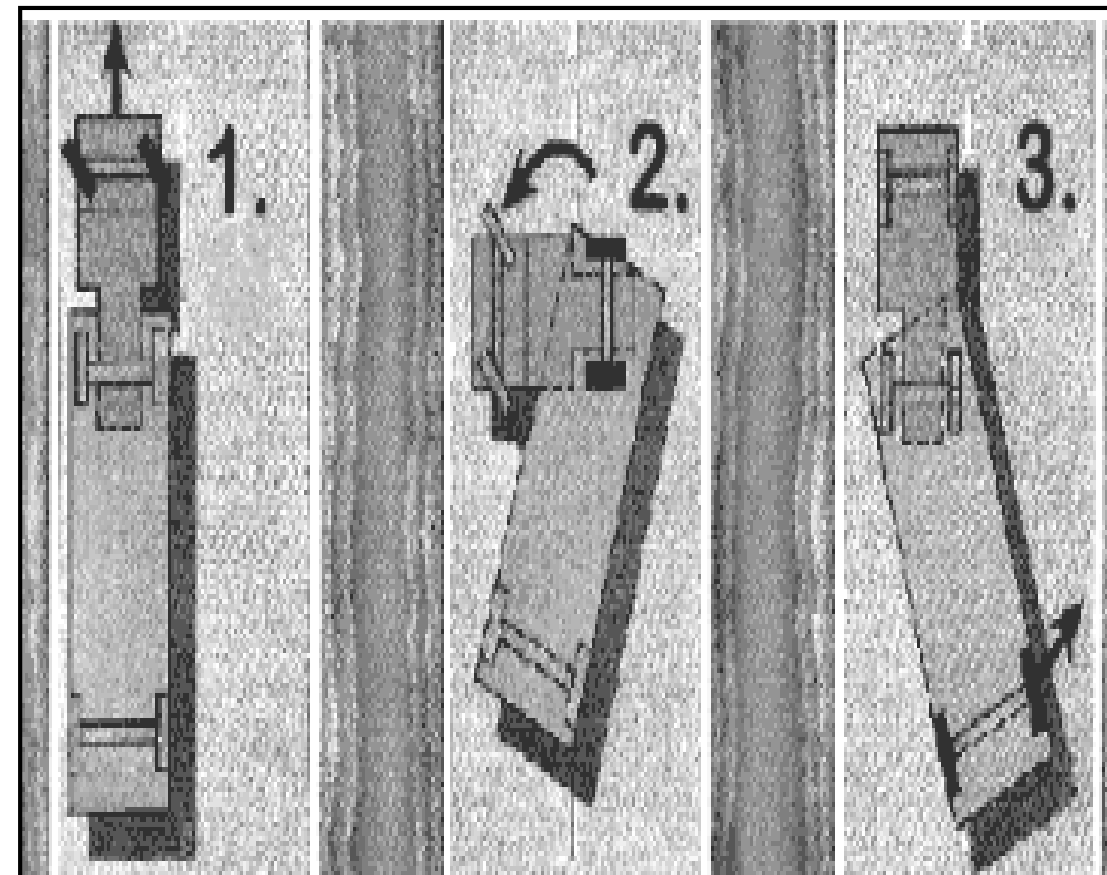
- Rear wheels will track at a shorter distance
- Tiller person may have to counter steer to off-set centrifugal force



Operating Tractor Drawn Apparatus- Jackknifing



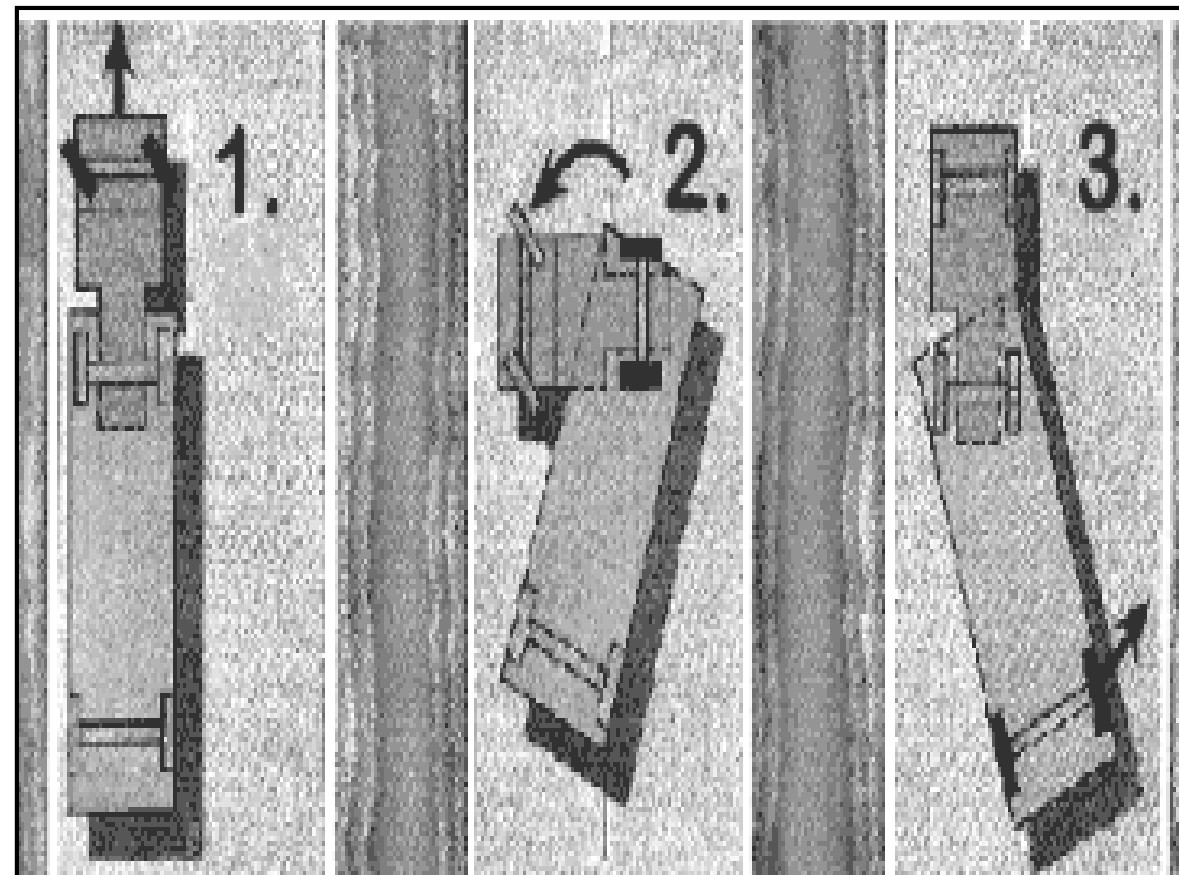
Figure 1: If you lock the steering axle brakes, the rig will move straight ahead regardless of the wheel angle.



Operating Tractor Drawn Apparatus- Jackknifing



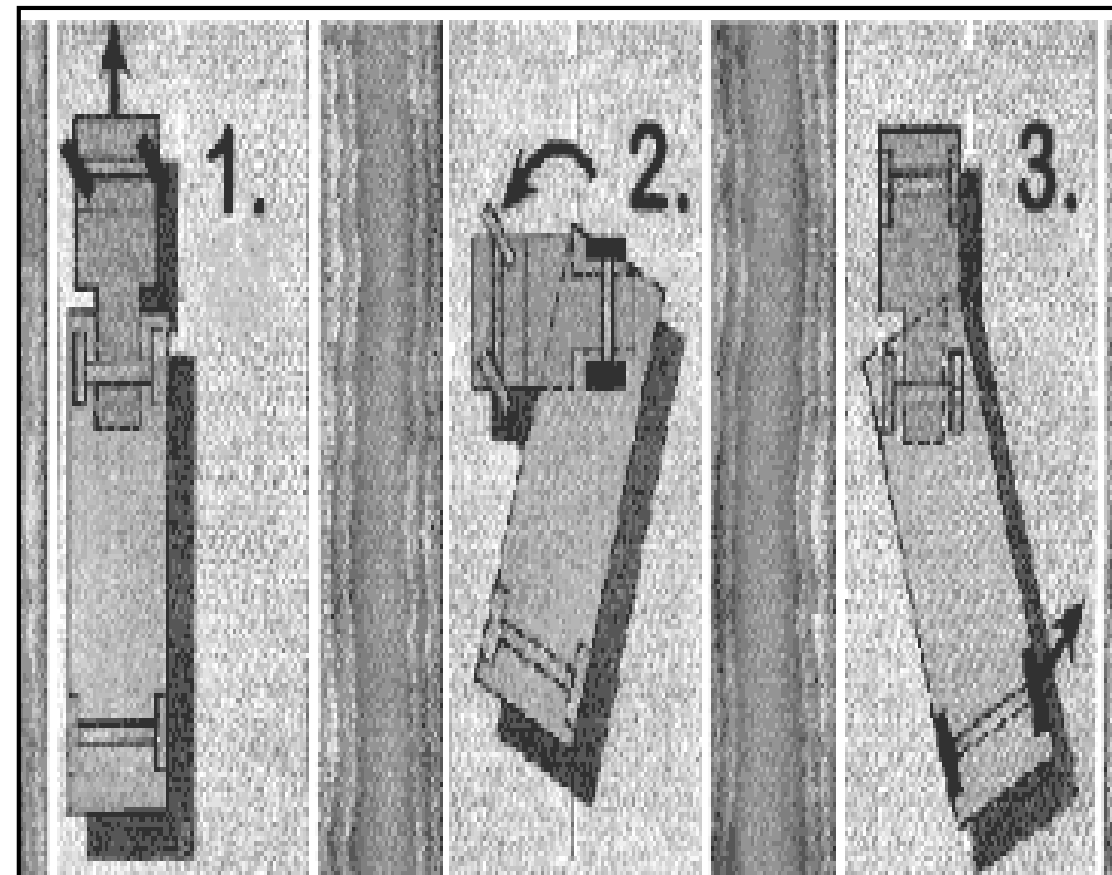
Figure 2: If you lock the drive axle, the rig will jackknife.



Operating Tractor Drawn Apparatus- Jackknifing



Figure 3: If you lock the trailer axle, you will get trailer swing.





TERMINOLOGY

- When operating tiller trucks, the following terminology should be understood.
- Signals from the driver to the tiller operator/tiller operator to driver without headsets:
 - 1 beep for stop
 - 2 beeps for forward
 - 3 beeps for back up

* All communication requires an acknowledgement- use the same horn blasts to acknowledge.

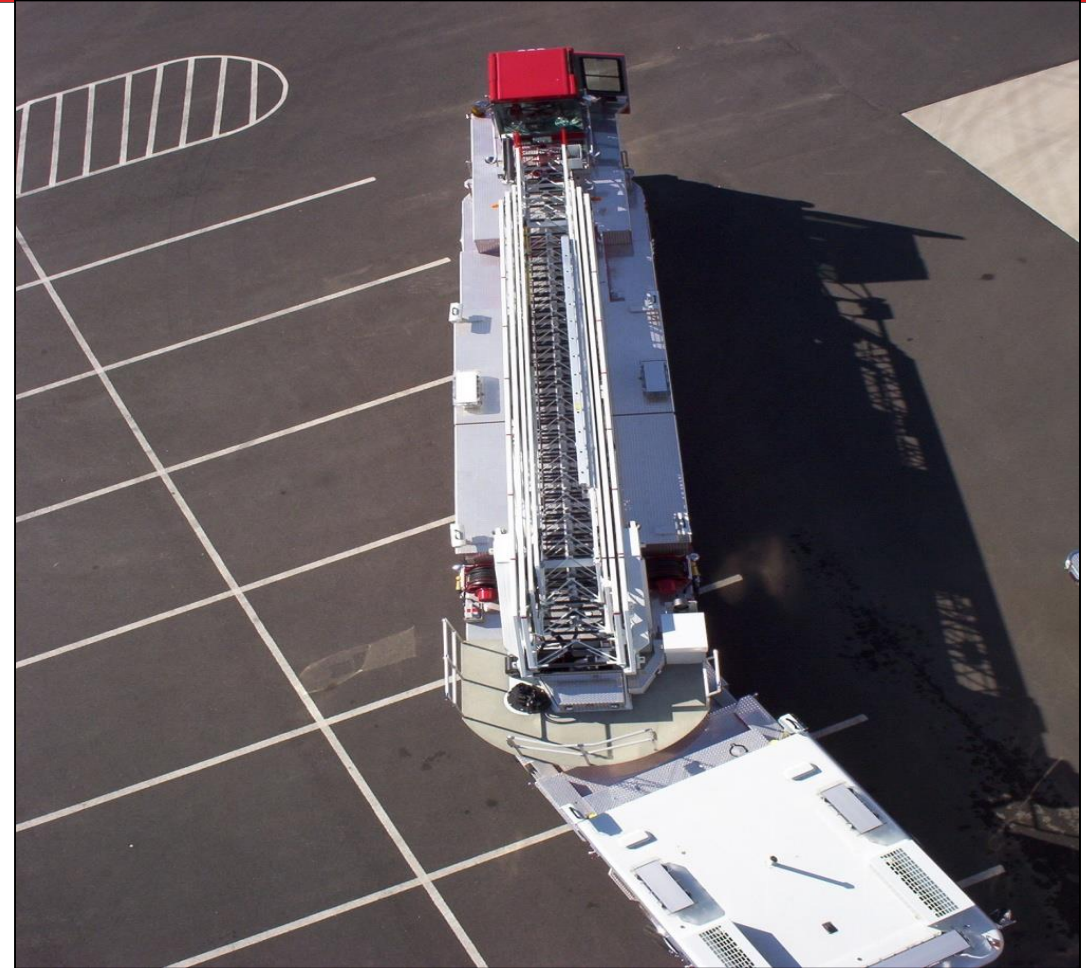
TERMINOLOGY

- **In-Line:** Tractor & Trailer are in straight-alignment, wheels straight.



TERMINOLOGY

- 5th Wheel Push
 - Where the driver steers the tractor to assist the tiller operator with pivoting the truck during backing. Only when necessary!!



PRINCIPLES OF BACKING

- The tiller operator leads the truck
- Tractor follows the trailer
- 5th Wheel Push as necessary



PRINCIPLES OF BACKING



- Hand Position: Turn steering wheel clockwise, trailer will steer to the left



PRINCIPLES OF BACKING



- Hand Position: Turn steering wheel counter-clockwise, trailer will steer to the right



TILLERING



While moving forward, hands should be positioned at either 9/3 or 5/7. Steer away from obstacles.



TILLERING

The View from the Tiller Seat

